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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,368	01/17/2002	Mihaela Van Der Schaar	US 020027	3938

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EXAMINER	
SHANG, ANNAN Q	

ART UNIT	PAPER NUMBER
2623	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/056,368	VAN DER SCHAAR, MIHAELA	
	Examiner	Art Unit	
	Annan Q. Shang	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. In view of the Appellant' Brief filed on 01/19/07, with respect to 1-21, PROSECUTION IS HEREBY REOPENED. The finality of the last office action has been withdrawn and a new ground(s) or rejection is hereby being made as set forth below. **This office action is made final.**

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

SCOTT E. BELIVEAU
PRIMARY PATENT EXAMINER
Acting SPE

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 17-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows:

Claims 17-19 recites a "signal" *modulated/encoded/embodied on a carrier wave/etc,* with functional descriptive material. While functional descriptive material may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a "signal" per se does not fall within any of the four statutory classes of 35 U.S.C. §101. A "signal" is not a process because it is not a series of steps per se. Furthermore, a "signal" is not a "machine", "composition of matter" or a "manufacture" because these statutory classes "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." (***1 D. Chisum, Patents § 1.02 (1994)).*** Machines, manufactures and compositions of matter are embodied by physical structures or material, whereas a "signal" has neither a physical structure nor a tangible material. That is, a "signal" is not a "machine" because it has no physical structure, and does not perform any useful, concrete and tangible result. Likewise, a "signal" is not a "composition of matter" because it is not "matter", but rather a form of energy. Finally, a "signal" is not a "manufacture" because all traditional definitions of a "manufacture" have required some form of physical structure, which a claimed signal does not have.

> A "manufacture" is defined as "the production of articles for use from raw materials or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." ***Diamond v. Chakrabarty, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1, 11, 8 USPQ 131, 133 (1931).***

Therefore, a "signal" is considered non-statutory because it is a form of energy, in the absence of any physical structure or tangible material, that does not fall within any of the four statutory classes of 35 U.S.C. §101.

NOTE: Refer to Annex IV, section (c) of the USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", Official Gazette notice of 22 November 2005 (currently at http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fendick et al (6,252,857)** in view of **Tillman et al (6,496,980).**

As to claims 1-6, note the **Fendick** reference figures 3-5, discloses method and apparatus for provisioned and dynamic quality of service in a communications network and further disclose a method for transmitting video data (col.1, lines 15-47), comprising the steps of:

Assigning a recipient to one of a plurality of multicast groups (MGs), each of the MGs being based on one of the group comprising: an identified average or minimum available bandwidth of a link over which a data stream of a given video segment is to be

multicasted; and an identified capability of the MG to which the data stream is to be multicasted (fig.3-5, col.4, lines 6-39, line 47-col.5, line 38 and col.6, lines 26-col.7, line 59), note that the NHC server builds up a delivery tree and multicasts to groups of receivers within that tree, supporting bandwidth and QoS for various types of IP flows (set of packets matching a particular profile defined in terms of source and IP addresses) where the multicasting takes into account bandwidth capabilities the tree capabilities and client capabilities, negotiation of bandwidth parameters and maintaining dynamic QoS on the network;

Selecting (Sender or Host NHC 301) a corresponding one of the group comprising: one of a plurality of predetermined ranges of bandwidths, so that the selected range contains the identified average or minimum available bandwidth of the MG of the receipt and one of a plurality of different data stream types so that the identified capability of the MG of the recipient is used to process data of the selected data type (fig.3-5, col.4, lines 6-39, line 47-col.5, line 38 and col.6, lines 26-col.7, line 59);

Fendick, teaches where each receiver communicates to the host or the source to receive a specific QoS for a specific type of IP flows based on its parameter profile (capabilities) and bandwidth, but silent to coding the data stream in a manner which takes advantage of range of bandwidths or type of data stream that has been selected.

However, note the **Tillman** reference figures 1-6, discloses method or providing replay on demand (live or pre-recorded) for streaming digital multimedia which employs scalable features (spatial, temporal, etc.,), coding and decoding techniques for coding

plurality of streams with common based layer and respectively different enhancement layers in a manner that takes advantage of the range of bandwidths or type of data, employs one or more enhancement layer(s) with/without frequency weighting and other quality improvement tool targeted towards a particular bit-rate range and the enhancement layer and further teaches performing iterations for the same video segment within the available bandwidth and client capabilities and preferences, switching between rates and various bandwidth to provide the client with high quality video at different rates without artifacts (figs.1-6, col.2, lines 32-59, col.3, line 22-col.4, line 8, lines 24-30, line 65-col.5, line 7, line 46-col.6, line 6 and col.9, lines 25-64).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Tillman into the system of Fendick to efficiently encode data stream to enable the various receivers with various processing capabilities to decode and process streams based on the processing capabilities and preferences of the various user (e.g., communicate in real time to the server to request for various segments of the same video at anytime as desired).

As to claim 7, Fendick further discloses receiving from the recipient host an identification of the recipient host capability when the link is established (col.4, lines 30-63 and col.7, lines 45-65).

As to claim 8, Tillman as modified by Fendick further discloses the ability to perform motion compensation and switching between FGS and MC-FGS structures based on bandwidth as discussed in claims 1-6.

Claim 9 is met as previously discussed with respect to claims 1-6.

As to claims 10-11, the claimed "A system for transmitting video data..." is composed of the same structural elements that were discussed with respect to the rejection of claims 1-6.

As to claims 12-16, the claimed "A machine readable medium that contains computer program code..." is composed of the same structural elements that were discussed with respect to the rejection of claims 1-6.

As to claims 17-19, the claimed "...computer program code, wherein, when the computer program code is executed by a processor..." is composed of the same structural elements that were discussed with respect to the rejection of claims 1-6.

Claims 20-21 are met as previously discussed with respect to claims 1-6.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McMahon (7,020,195) discloses layered coding and decoding of image data.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355.** The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197 (toll-free)**. If you would like assistance from a **USPTO Customer Service Representative or access** to the automated information system, **call 800-786-9199 (IN USA OR CANADA) or 571-272-1000**.

Annan Q. Shang